The Open University

PRACTICAL WORK EXPERIENCE FOR CAREERS LINKED TO SCIENCE

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1. Introduction

The aim of this booklet is to help you further develop work-related laboratory or field-based experience. You may already be completing practical activities as part of your studies, but if you're studying for career related reasons, it's important to make yourself as competitive as possible in today's job market.

Some reasons to explore work experience:

- Research from The University of Edinburgh on The value of student work experience in the graduate labour market showed that employers value students with a wide range of experience.
- Finding out what happens in the workplace and seeing different career possibilities first-hand may help to confirm your existing career plans or give you some realistic alternatives. You might also come across jobs that are new to you or that you've never considered.
- The skills graduate employers most look for are teamwork, written and spoken communication skills, problem solving and numeracy. Many OU students possess valuable evidence of these skills gained through a combination of study, life, and work experience.
- You could be competing for jobs against many other graduates. Try to give yourself equal advantage by acquiring some hands-on skills.
- If you intend to take a higher degree or vocational course in your subject, entry could also be competitive. Lab or field experience and applied knowhow could strengthen your application.
- Many students find that relevant work experience has a positive effect on their academic performance. Being involved in activities that are not directly linked to the course, and in a different context, could boost your knowledge, confidence and understanding.

This booklet gives an outline of the kinds of work placement opportunities that may be out there. It will also direct you to sources of further help and information so you can do your own research. It includes plenty of practical tips and strategies to try when exploring work experience.

2. What are you looking for?

Most Open University students have busy lives, often combining their studies with work, home, and other commitments. The first thing to decide – even before you start researching employers and opportunities – is when you would like to do your work experience and how flexible you can be. Your preferred timeline may not fit that of placement providers, so some form of compromise might be necessary.

Common patterns for work experience:

- a solid block of experience, usually lasting one to eight weeks, often unpaid. *
- one or more days a week over the period of a month or more
- longer, more structured placements on a full-time basis for several months (such as over the summer) to a year. These are usually called internships, are often paid, and may suit if you are not currently employed or planning a career change.
- voluntary work, such as working with charitable organisations.
- job shadowing, which may last only one day (or half a day). This may give you an insight into an organisation and a specific role.
- insight days, which are offered by employers to give students a flavour of what happens within a business. It's a chance to meet current employees, providing an overview of the range of activities undertaken within the organisation, and could also involve taking a tour of the premises. These events are a good opportunity to network, to get noticed and will make a great addition to your CV.

*If undertaking an unpaid or voluntary experience, it is important to note that work experience hosts (employers), are required to comply with National Minimum Wage legislation. Some employers may take advantage of the fact that you need experience, but it is important to remember that the law is there to protect you. See the resources at the end of this section for more details.

Things to consider about your availability

- What days, dates and times are best for you?
- How do your preferences fit in with any naturally occurring fluctuations in the sector(s) that interests you?
- Is it feasible for you to take time off from a paid job, perhaps in the form of annual leave or flexitime to get work experience?
- Can you offer a range of dates and possibilities or is your schedule fixed?
- What hours can you work during the placement? If you have domestic or caring responsibilities, for example, you may want to negotiate flexible working.

Be sure of where you stand on this before approaching employers so you can offer clarity about what you're offering. It's best to be open about what you can and can't do. It may be more difficult to alter the terms of your work experience after you begin.

Identifying suitable locations

Undertake online searches of prospective work experience employers by location. If you're reliant on public transport, ensure that distances are feasible to travel to. Check timetables and connections, this will help you work out if the journey is manageable. Ask if employers provide their own transport. This is reasonably common for out-of-town sites, such as business parks and universities.

How specialised do you want the placement to be?

If you're interested in the environment, for example, do you want to find out more about policy, sustainability, or recycling? If you hold out for something very specific, you may not have too much choice, and finding the placement could take longer than you anticipate. Consider what's important to you. Will general experience serve you well or do you need more specialised input because of your career plans or academic assignments? Your first block of work experience may not be your last, and one opportunity can lead to another. So, if you do undertake a broad range of duties, performing well and building up contacts, you could be offered a niche position at a later point.

Jobseekers Allowance/Universal Credit

If you are receiving Jobseeker's Allowance (Universal Credit), you are allowed to undertake work experience. Benefit recipients should check with their local benefits agency or Jobcentre Plus before committing to any type of work experience.

- Allaboutcareers (Work Experience: Know your rights)
- GOV.UK (Contact Jobcentre Plus)
- GOV.UK (Jobseeker's Allowance (JSA)

3. Starting your search

You may be tempted to rush online to identify possible work experience providers. Before you do, think about what your objective is. If you're trying to find out about particular firms or organisations, then their websites may be a good place to start. If you have no clear idea of what's out there, pause and take stock.

Searching for 'Laboratories near me' in an internet search may provide results in medical and privately run analytical laboratories. Remember that not all laboratories will be listed in this way, as many organisations may have onsite laboratories (see below for resources). Consider using LinkedIn to identify companies and individuals that are employed within the sectors that interest you.

Laboratory experience

Wherever you live, you'll usually have hospitals and schools within travelling distance. They'll probably all have laboratories. If you're located in a very remote or rural area, these might be all that's available. However, if you're based in a more urban area, there may be many other possibilities. These include:

- universities and colleges
- local or unitary authority or laboratory facilities relating to public health and consumer/environmental protection
- factories and manufacturing plants.

In addition, you might find one or more of the following in your vicinity:

- government laboratories
- scientific/chemical processing or pharmaceutical companies
- research facilities
- organisations making food or consumer products
- utility services such as water companies
- science parks.

You could start by generating your own ideas by thinking about what's near to you. For example, a fairly sizeable coastal town, could have a petro-chemical refinery, a cement works and a power station, as well as many of the places listed above. All may have had on-site laboratories. However, you might find that some of their work is now

outsourced to private laboratories, which could provide you with additional options.

If you're looking for pharmaceutical and related companies, try the Association of the British Pharmaceutical Industry (ABPI). You could also take a look at the Chemical Industry Association for careers in the chemical industry. Members of professional bodies should also be able to locate scientific organisations through their websites, some of which are listed toward the end of Section 4: Finding placements through networking

Insider view

Joanne Needham (CBiol MRSB), Professional Development Manager from the Royal Society of Biology.

"Gaining work experience is vitally important for getting on the career ladder, taking the time to volunteer can also give you a head start in your chosen field. Either or both of these experiences will give you:

- hands on experience
- new knowledge
- a more informed insight into a specific career path
- experience of work environment and work ethos
- more coherent ideas about how organisations work which will stand out in interviews with potential employers
- a great addition to your CV."

Environmental experience

If you're looking for environmental experience the opportunities on your doorstep may include:

- country parks
- fieldwork and educational centres
- ecological, agricultural, and horticultural centres
- gardens, heritage sites
- wildlife trusts
- green transport schemes
- recycling facilities
- regeneration, restoration and heritage projects.

You may be able to search on national websites such as The Wildlife Trusts, The Canal & River Trust or The Woodland Trust for volunteering opportunities. Some job search websites such as

EnvironmentJobs or GreenJobs also advertise volunteering and internship vacancies. Professional body websites may also be a useful place to explore placements, jobs and volunteering and other benefits that membership could offer such as training, networking, and mentor schemes.

Some of the places covered in "Laboratory Experience" may also be appropriate for your purposes – the cement works may have staff who monitor pollution levels, for example.

Another option to add to your list are local authorities. Your local civic centre/town hall or county council will have an environmental department and other relevant teams, depending on whether it covers an urban or rural area. You might be surprised by the range of issues that are covered by local government.

You could also consider some less likely sources of experience. Commercial firms are increasingly turning their thoughts to corporate social responsibility (CSR). This involves engaging with both the community and the environment. Larger firms in finance, law, energy and business often have their own CSR departments. This could be an excellent work experience opportunity for an OU student. You may also consider environmental consultancies, sending a speculative application is a good place to start – how to frame this is discussed in Section 5.

Insider view:

Lucy Lovell, a BSc Natural Sciences student who undertook an internship with Lincolnshire Wildlife Trust.

"The experience with Lincolnshire Wildlife Trust (LWT) was fantastic, I have been able to experience many aspects of working in conservation and gained much insight from talking with different members of staff. I liked having the opportunity to do practical work, and also being able to do work that contributed towards LWT's objectives. I am able to work with little hand holding which is important when you work with busy people!

I learnt so much during the placement from how a local wildlife site is designated to making willow fish, a real mixed bag."

Resources

- UK Science Parks (UKSPA) lists and provides links to science parks across the UK.
- Specialist recruitment agencies may offer a range of full or part-time opportunities for lab jobs. You could try:
  - SRG Science, clinical and engineering jobs in the UK
  - Jobs In Science, vacancies across the UK to suit all levels of scientists.
- Explore the resources of appropriate individual prospects job profiles for more information about specialist recruitment agencies.
- UK Resource Centre for Women in Science, Engineering and Technology offer practical advice and updates on the latest developments.
- The Institute of Physics provides information and advice on securing work experience.
- The Royal Society of Biology offers advice and useful information for securing work experience.
- British Chambers of Commerce UK's largest business network.
- Association of the British Pharmaceutical Industry is the trade association of companies producing prescription medicines. The site contains information and resources which give sound general guidelines about careers related issues. Take a look at the Getting Experience section of their website.
- The Daphne Jackson Trust is committed to supporting returners in the sciences and may be open to providing advice and contacts in the right circumstances.
- GO Wales is a source of placements, work experience and work shadowing in Wales. Check out eligibility requirements.
- Women into Science, Engineering and Construction (WISE) is a collaboration between industry and education to encourage gender balance in STEM industries. Encouraging girls to value and pursue careers in STEM, their focus is mainly on those of school age, but they may have offshoots or links that could prove useful.
- EQUATE Scotland is making a positive difference for women in science, engineering, technology, and the built environment.

4. Finding placements through networking

Networking – using personal contacts – can put you ahead of the crowd. Some opportunities may only be accessed through contacts. For example, when a company doesn't have time or resources to advertise for a summer intern, potential candidates could be identified through friends or family of existing employees.

Networking is now accepted as part of the job-seeking process. This is your chance to develop and use an essential skill. Personal recommendations and insider information can also help you to get in touch with the right people as quickly and easily as possible, as websites may not list email addresses or direct phone lines for their staff.

Informal networking

This involves asking your friends and family to keep an eye out for likely placements or contacts who may be able to help your search. You might think that you don't have the right connections, but do you know what your neighbour's family do? They could be the director of a laboratory, a human resource officer for a big food manufacturer, or work in a hospital phlebotomy department. Remember that it's not always your initial contacts who can provide the necessary links, but people two or three stages along the chain.

For those of you seeking lab experience through your extended network, why not try asking your doctor, dentist, vet, or optician what labs they know of and whether they can suggest the best people to approach in these facilities? If your hobbies and interests are connected to the natural world – membership of a ramblers or walking group, or regular visits to a local conservation centre – the chances are that at least some of the people you meet in this way will be working in the environment or have contacts who are. This is your own readymade source of placement possibilities.

Using the OU to network and social networking

Your fellow students are part of your network, so it's worth tapping into their expertise. There are a number of OU resources that can support your search. Firstly, OU online forums, these include those

linked to your course, as well as the forums webinars hosted by the OU Careers and Employability Services. Using the professional networking platform, LinkedIn, will provide you with access to thousands of current and former students. Joining specific LinkedIn groups like TOUCaN (The Open University Careers Network) and the OU Alumni group will also provide you with access to potential contacts.

A good tip is to start looking for OU students/graduates working in the sectors you wish to learn more about or secure work experience in. You'll find they'll probably be more receptive to your questions because they have a shared experience as an OU student.

Social media sites like Twitter and Facebook can also be used for career management purposes, and work experience is one aspect of this. They can be a means of locating companies and individuals in the field in which you want to obtain experience. Many professional bodies such as the Royal Society of Chemistry or the Institute of Physics, and also leading environmental charities, have social media accounts. Their websites often also contain forums on hot topics and interactive discussions, or question and answer sessions – this is another form of networking. It's helpful to remember that there is a Careers and Employability Services Facebook page.

It could make sense to get back in touch with old classmates who might be able to help you. Utilising professional networking sites, such as LinkedIn, will help with this.

Networking websites like Green Drinks offer virtual networking opportunities for all those concerned about the planet. Members also physically meet up on a regular basis in towns and cities around the world.

This kind of virtual work shadowing, where you can chat to individuals about their jobs, is a good way to build rapport. It's important to do this before requesting work experience or a placement.

Note that the usual protocols about guarding your privacy apply until you are sure recent contacts are acting in good faith.

Networking through careers events

Most universities run careers fairs once or twice a year which are usually free and sometimes open to all. The OU offers OU Online TalentConnect careers fairs where you can connect with partner employers. As an OU student or alumni you can also sign up for

OpportunityHub to access the latest vacancies from our partner employers and news about upcoming events like careers fairs.

Keep an eye on the OU careers website and websites of any higher education institutions within easy reach and register for upcoming activities which involve employers from scientific backgrounds. Make sure that you get individual names for these employers and perhaps connect with them via LinkedIn.

You can also look out for this type of information on careers websites such as Gradcracker, Prospects and Targetjobs.

Formal networking

There are a number of advantages to joining a professional body, including the opportunity to network on a more formal basis with like-minded people who enjoy science and who work in some aspect of the discipline. Frequently there are members-only events, lectures, and conferences. These can be a fruitful source of advice and assistance if you are on the hunt for experience. Remember that events may take place in your region so, take a look at your preferred society.

How to network

Networking is not necessarily about requesting work experience as soon as you meet someone. This is fine if you are dealing with people familiar to you, but tread more carefully with those that you don't know well. A direct demand for a placement may not be appropriate on first meeting. Begin by asking for information and establishing a rapport. For instance, at a careers fair, chat with the representatives about their companies and what they do and establish that you are a keen and committed student. Then mention an interest in spending time in their labs, offices or sites, if it seems appropriate. Alternatively, take their business card and email them later if they are too busy to give you individual attention at the time.

Resources

- OpportunityHub regularly advertises events across the UK. You can also find advice on networking and information interviewing within the Careers and Employability Services Help Centre. Our pages OU Study and Your Career and Careers with your OU subject provides a list of science and environment-related links to help your research. You can also access a range of recorded

webinars designed to offer insight into How to network and use social media for your career.

- Prospects: UK higher education careers site, containing placements and job vacancy information. This site contains industry overviews, job profiles, case studies and links to extensive further resources in its Job sectors pages.
- Websites like TARGETjobs and Gradcracker provide useful information such as employer profiles, details of graduate jobs and work experience opportunities.

Scientific professional bodies

Try an internet search if the field that represents your interests isn't in the list below.

- Biochemical Society
- Royal Society of Chemistry
- The Genetics Society
- The British Society for Genetic Medicine
- The European Society of Human Genetics
- Society for Applied Microbiology
- Microbiology Society
- Royal Society of Biology
- Chemical Industries Association
- Institute of Physics
- British Toxicology Society

Environmental professional bodies

- The Institution of Environmental Sciences (IES)
- The Institute of Environmental Management & Assessment (IEMA)
- Society for the Environment
- Botanical Society of the British and Ireland
- Countryside Management Association
- Chartered Institute of Ecology and Environmental Management
- LANTRA – the sector skills council for the land based and environment industry
- Chartered Institution of Wastes Management
- Chartered Institution of Water and Environmental Management

5. Contacting employers

What's the best way to get in touch with a potential work experience provider?

There's no set answer to this. For longer-term internships, such as summer internships or one-year placements, you'll probably need to complete an application form and go through the same sort of selection procedures that you would expect for a permanent job. Some hospitals could also expect you to submit a form, even if the placement is just for a week or so.

However, it's quite possible that you'll be applying speculatively, without knowing if a placement exists. In this case, what's your preferred style of communication?

You may want to call a company. If you take this route, be prepared, and make it clear who you wish to speak to. If they're not available, ask when it would be best to call back. If you manage to obtain a named contact or, better still, a direct number or extension, you're over this first hurdle. You could also carry out some research first through LinkedIn or the company website to see if you can identify an appropriate contact.

Many people feel more at ease sending an email or a letter, along with a concise CV. This can be an effective method. There's plenty of advice on how to word these within the OU Careers and Employability Services Help Centre.

Remember to use your existing contacts. You never know where they could lead.

Insider view

Ria Monkton, Open University Graduate and Environmental Consultant

"I had a slightly different start to my environmental career than most, through luck and previous contacts. I worked at the company as a secretary before leaving to travel the world. When I got back, I got in touch with the company to see if they would hire me to work in their environment team whilst I worked on my environmental science degree with the OU part-time. They agreed and I started the new job and my first module on the same day.

It was tough working full-time and overlapping my modules so I could reduce a 6 year course into as short a time as possible (I managed to reduce it to about 4.5 years). But, I was able to take advantage of working with environmental professionals that I could bounce ideas and theories off and, in subjects that I really struggled with, I had people that I could ask questions of to break through.

You'll be held in very high regard for completing your studies with the OU, so make sure you showcase what you are doing/have done. People are thrilled to have someone in their team that has the skills needed to cope with working and studying."

Don't make assumptions

Help employers understand how the OU operates and the demographics of its student body. Avoid any misunderstandings by explaining your situation in more detail. For example, that you're a mature student who is studying through distance learning.

Give employers time to deal with your query, you may not hear from them straight away. If they haven't contacted you after two to three weeks, send a follow up email to check the status of your application/query, if you feel confident enough, call. If asked the reason for your call, your response could be something like: 'I've been in correspondence with Dr Evans and need to speak to him personally.'

Insider view

Dr Robert Bowles, Careers Specialist, Royal Society of Chemistry

"It can be hard to get chemistry related work experience, especially in labs, but companies and universities really like students who have the enthusiasm and independence to hunt for a relevant position. Your local hospital is worth approaching for work experience in their research departments, or pathology labs that use a lot of techniques involving chemistry. You can also contact your local university's chemistry department, to find out if they can help.

An easier option might be to look for chemical companies in your area and then ask if they might have work experience in some of the other business functions within the company. This is a good way to learn more about the uses and applications of chemistry without having to be fully trained to be safe in a laboratory.

Contacting general science research institutes, companies on local science parks as well as small and medium enterprises (SMEs) can be

useful. SMEs are often more flexible. Be aware that they are more likely to be able to help if you ask them well in advance of when you need to do your placement. You can also follow these companies on social media to find out what they can offer.

It is sometimes easier to ask for work shadowing opportunities, rather than direct hands-on work experience. Work shadowing is usually a shorter experience where someone shows you what they do rather than hands-on work."

Selling your skills

Make sure that your application has no spelling or grammatical errors. Spending additional time at this stage will help present a positive image about you to the reader.

Insider view

Three employers provide some advice that you should consider before applying

"We look for students who are enthusiastic and keen to develop their scientific knowledge further and who also have a genuine interest in Randox and Invitro Diagnostics. We also look for students who want to experience more than just a placement and as such treat their time here as a real step in their career."

"Gain skills and experiences from studies, extra-curricular activities or work experience that you can bring to the business. Develop your commercial awareness through your experiences and through reading the business press to gain knowledge of the organisation that you are applying for and the wider business environment."

"Strong applications are those that directly address the essential and desirable criteria on the advert, by adopting structured answers both during the application stage and during interview. Using evidence to support any answers at both these stages can really make evidence stand out."

Resources

Explore the OU Careers and Employability Services Help Centre for information on advice on CVs and job applications and a range of other useful resources to support your career. These include interactive Abintegro tools such as the CV builder and CV360 which you can use to create a CV and assess it against criteria used by hiring managers and computerised applicant tracking systems.

You can also use the Abintegro Interveiw360 to practice your interview techniques in a recorded mock interview where you can practice answering questions against the clock and record yourself and reflect on your performance.

6. Types of work experience

Paid placements

Paid internships can be offered by large and small organisations. Typically, big companies offer a wide range of roles and will be looking for a large number of interns.

Smaller organisations may offer paid roles by participating in the Santander Universities SMEs Internship Programme. This funding frequently helps to support those organisations which may otherwise not be able to offer paid opportunities.

In this section you will find information and insights into some of the paid placements available to you.

Insider view

GSK

“A placement is a great chance to apply the skills you have learned at university in a ‘live’ role and learn new ones. The work will bring you into contact with people across the business, so you’ll be constantly developing your interpersonal skills. You’ll also build your organisational and problem-solving abilities.”

Science

Big companies, such as Rolls Royce, Pfizer and GSK, and large research organisations, such as the Wellcome Trust, the National Physical Laboratory, and the Institute of Cancer Research, frequently offer a number of paid placements during the traditional summer vacation and may also offer placements of up to a year.

You are as eligible to apply for these programmes as any other undergraduate student. Points to note include:

- The selection process can be competitive. Seek advice and feedback on your application technique from the OU Careers and Employability Services before you apply.
- The deadlines for some schemes can be well in advance of the placement itself, often sometime between November and February. Research will help you be prepared for when the application window opens. If no application deadline is indicated, apply early.

- Some employers will stipulate that candidates will need to have completed the equivalent of two academic years of study at degree level. They will often exclude final year students from internships.
- Some employers may limit roles to those students that have to complete a placement as part of their degree programme.
- You may work on a specific project or projects that tie in with your interests, expertise and/or organisational need. It is likely that you will be treated as a full member of the team and expected to contribute as much as any of your colleagues in permanent positions.
- These firms may run other types of work experience programmes which may be reserved for local schools. However, it's always worth enquiring because individuals may be convinced by your motivation.

Check individual company websites for details of internships.

Insider view

Caroline Hall, Randox Laboratories describes the benefits to students and business that internships can bring.

"Randox have benefitted from having students because they get to bring them onto projects to provide a fresh perspective and motivation to carry the projects forward. We take on over 50 placement students each year, with the majority of these being assigned within our Science areas but conducting Research & Development and Quality Control.

Each student is given a project to work on, this may be completed independently or along with other placement students and along with this project work we try to ensure our students are given daily tasks and responsibilities that our full-time members of staff would complete. This is to ensure they get a good understanding of what their degree looks like in a real working lab."

Virtual Internships

A virtual internship is a flexible, full or part-time, paid opportunity to gain work experience. Rather than being based at a workplace, you'll work remotely from home through the internet, much in the same way you would do as an OU student. You'll work on projects and tasks and have regular catch ups and support from the employer during your internship. You can find out more about Virtual

Internships on our website. You can search for Virtual Internship vacancies on OpportunityHub.

Source your own internship

As well as searching on OpportunityHub you may also wish to take a speculative approach to companies you're interested in doing an internship with. Even if they aren't actively advertising any internship positions there are ways to create your own internship with an employer. Some employers could be receptive to this and the approach could work well with smaller businesses. If the company you apply to is a small or medium sized enterprise (SME) they may qualify for partial funding to cover the cost of your internship through Santander funding for employers.

Environmental

The environmental sector is growing and to ensure that there is a good supply of future employees, environmental consultancies may offer internship opportunities on a paid or unpaid basis.

Business internships could be another way forward if you choose your prospective employer with care. A placement with an oil company or with any organisation that has a presence in matters concerning the environment will combine a new perspective on environmental issues, with business experience. The latter is something that many environmental consultancies find lacking in graduates, so it could give you an edge when it comes to applying for posts.

Another idea would be to explore internships with a management consultancy that specialises in the environment. How does that differ from an environmental consultancy? The latter concentrates solely on providing business solutions that comply with local, regional, national, or international regulations. Management consultancies are more generic and can deliver all kinds of business advice. Both types of consultancy are profit driven.

For a list of management consultancies see the Management Consultancies Association (MCA) website. Search for environmental consultancies on the Environmental Data Services (ENDS) and environmentanalyst.

Environmental charities may offer a limited number of internships, they often rely on volunteers (for more on this see Section 6), such as Greenpeace, Friends of the Earth and the Woodland Trust. There are

many charities, an internet search will help you identify those in your area of interest.

Note that all types of internships, whether scientific or environmental, are competitive, attracting undergraduates and postgraduates from a range of universities. Remember that your ability to undertake distance learning, to manage your time effectively and motivate yourself are positive skills to highlight as an OU student.

Apply in plenty of time and submit a well-considered application form to give yourself the best possible start.

Resources

- Vacancies for internships with OU partner employers are posted on OpportunityHub.
- OpenLearn's Internships and other work experiences badged open course can help you learn more about searching and applying for internships and other work experience options.
- Prospects is a UK higher education careers site which advertises opportunities from a range of employers. It also offers career and industry insights.
- Targetjobs.co.uk is a graduate careers website with details of companies offering work experience opportunities, it also provides sector specific information and advice.
- Gradcracker is a STEM focused graduate careers website featuring details of companies within different sectors and advertising STEM specific vacancies.
- The Royal Society of Chemistry advertises internships within the society.
- Science & Technology Facilities Council offers internships annually.
- The Royal Society of Biology markets internships on behalf of relevant companies, societies, charities, and research organisations in two areas of their website. Explore Industrial & Summer Placements and Undergraduate Studentships.
- Step into the NHS – work experience provides advice on how to find work experience within the NHS.
- Research and identify potential employers in your region and look for internship information on their websites. Try Rate My Placement for a wide variety of roles within a broad range of businesses and organisations.

Graduate paid internships and Knowledge Transfer Partnerships (KTPs)

Graduate paid internships are opportunities of between six and twelve months aimed at those who have recently graduated. They may be offered by the same sort of employers that offer undergraduate paid internships. Those run by Knowledge Transfer Partnerships (KTPs) are one year in length and are collaborations between academia and industry, in which a mandatory component is the employment of a newly graduated scientist who is put to work on a live project.

If you are interested, you will need to have good grades and be able to market your skills. Vacancies are publicised in the same way as the undergraduate programmes mentioned previously.

Unpaid placements

Unpaid placements are a tried and tested way of becoming more familiar with work in a range of areas. They can be seen as discriminatory as not all students will be able to afford this type of experience, especially if it continues beyond a couple of weeks. These opportunities are not always advertised and will need you to undertake some research and possibly identify some contacts through your network. Some companies may have never offered such experiences, it may be helpful to you and the employer (placement provider) to consider the type of work you'd like to gain experience of, to ensure that you maximise your time with them.

If this is a route you plan to take, think about how much time you can afford to work in this way. Also consider if the employer should be offering you the national minimum wage.

Will you get useful experience on an unstructured placement?

This is hard to gauge. In general, the longer you stay on a placement the greater the chance of additional responsibilities and more interesting tasks. This is especially true if you prove yourself in the first few days or weeks by showing interest and enthusiasm. But, offering to help, putting yourself forward and performing very routine roles will help to demonstrate your motivation and commitment. The experience you gain will help you build up a picture of that working environment.

Due to the pressure of work and the sensitive, complex, or risky nature of some scientific techniques, it may be impossible for you to accomplish everything that you'd like to, but you should be able to watch and learn while others carry out more involved or demanding duties: this is the difference between 'work experience' and 'work shadowing'.

When you're reflecting on your experience or describing it in applications, CVs and at interview, it is valid to relate what you have discovered through observing others. A useful way of keeping track of your experiences during a placement can be keeping a reflective diary. You can log what you've learned and the new skills you've gained. It can offer a handy reminder when considering the experience you have in an application, CV or interview.

Insider view

The Met Office

"We offer ad-hoc work experience for people of any age to express their interest in working here for a certain amount of time to gain some experience and knowledge of their area of interest. Most of these people have an idea of which part of the Met Office they would like to work in. This really can be any period of time up to one month."

Other placements

It may not always be possible the secure your preferred work experience placement. It's still worth exploring other types of experience and thinking about what it could offer you. For example, working in the marketing department of a large laboratory, pharmaceutical company or a professional body may not offer you the chance to gain laboratory skills, but it could provide you with industry insights and a broader range of transferable skills including:

- problem solving
- critical thinking
- analytical skills
- objective thinking
- numerical skills

It's important to remember that you'll also develop your core skills and competencies that are valued by employers:

- written and verbal communication

- commercial awareness
- teamworking
- interpersonal skills and
- enthusiasm and motivation.

It's worth taking some time to think about any experience you've had and how you can demonstrate these skills.

School and college placements

School and college work experience is often a prerequisite for many trainee teacher programmes.

Insider view

Two perspectives from current teachers - including an Open University, Natural Sciences (Physics) graduate.

"My experience in applying for Postgraduate Certificate in Education (PGCE) courses with local universities points to school experience being a high priority. For my part, I think all potential teachers should spend some time as a teaching assistant (volunteer or paid) to get a broad understanding of different students' needs, what everyday life in school is like and to gain an idea of the scope of commitment required to teach. Experience working with youth groups is also invaluable, e.g. scouting."

"I think many schools would be receptive to having OU students in. They are very aware of the shortage of good teachers and would encourage it wherever possible. I trained in later life and a prerequisite of even signing up to the university course was to have completed 20 hours lesson observation in schools. Every school I approached was happy for me to do so.

I would imagine that the student should write to Head of Science, explaining what they want. They should probably observe at first, then try some co-teaching and eventually take a class on their own. If doing this, they should prepare for feedback and also be able to reflect on their own progress.

There would obviously be health and safety implications and the student would need a full Disclosure and Barring Service (DBS) check. Most teachers are receptive to students coming in because if the time is structured correctly, it will end with the teacher having some marking time, while the student takes the lesson, even if the teacher is at the back of class."

As per the advice above, from a current teacher, initial contact should be with the head of department. To work in schools, you'll need a DBS check. This will probably need to be undertaken every time you work with a different school. Most schools and colleges will be well disposed toward requests for work experience.

It's worth highlighting any links that you have with the school, for example, if your own or related children attend. Check the school's website so you sound informed in your cover letter and in any subsequent phone calls to the school. It might also be useful to show that you've researched the number of students and how many are doing science at different levels.

Securing lab experience in schools may be more difficult than in other settings. All the advice received during the researching of this handbook has suggested that for several reasons, primarily health and safety, schools are unlikely to consider this. However, if options are limited, it may still be worth a try, especially if you are happy to job shadow.

Insider view

Academics at The Open University

"For ad-hoc opportunities contact specific faculty members. Explain carefully how the experience that you are seeking would be relevant to specific modules. Demonstrate your ability to apply Physics or the subject you are studying in the context of their work.

Remember that your previous experience of employment will be an advantage, as it should be able to show that you are committed and able to show up on time. Use this experience to highlight your strengths and explain your experience as a distance learner. You should also mention your experience of the OpenScience Laboratory and any other previous experience that you may have."

"Work experience gives you a taste of a possible career, helping you to decide on your future direction. Furthermore, potential employers or academic admissions tutors will be impressed by relevant work experience placements on your CV. They will indicate that you have a good idea of what your work will entail and hence that you are more likely to be committed to the career. Having arranged work experience placements also demonstrates initiative."

"Engage with Open Science Labs, consider short summer lab schools. Contact the relevant departments within The Open University. There are projects designed for Year 11 students, these could be adapted for undergraduates. Explore your subject of

interest and identify the area of research that interests you the most. Then contact the relevant department/academic to request a work experience placement. It is worth adding that you can try this with universities that are geographically close to you too."

OpenScience Laboratory

The OpenScience laboratory allows you to take part in practical science, no matter where you are, as long as you have access to the internet. You can carry out investigations using on-screen instruments, create virtual scenarios using real data and even gain remote access to scientific equipment to carry out experiments. The OpenScience Laboratory website hosts over 100 practical science experiments relevant to different areas of science. You'll be able to work through virtual experiments, use lab equipment remotely like optical microscopes and spectrometers and watch labcasts of live interactive broadcasts.

Laboratory Skills for Science Residential Schools

We offer some optional hands-on laboratory schools in our laboratories in Milton Keynes. There's an additional fee for these schools, and although they don't carry credit toward your qualification, they will appear in your qualification transcript. Registration for these schools is by telephone only and numbers are limited. The skills section of the Science Study Home site provides details of the laboratory schools and optional field schools together with any prerequisite study.

Hospital placements

If you're looking for lab experience, your nearest hospital might seem the obvious first port of call. Initially, look at the website of the hospital(s) that you have in mind. There may be a section on work experience, with the details of staff contacts and an outline of the application and selection process. There could also be eligibility criteria: typically, you need to live in the patient catchment area or at least somewhere that borders it.

Some hospitals will have a work experience team, they may liaise only with students from local universities or higher education institutions with which they have long-established links. Some hospitals may refer you to their website for details of how to apply.

Others may ask you to apply to named individuals within a department.

Remember that each trust varies in the way that it recruits, so there is no hard and fast rule across the NHS. Take a look at the Health Careers website for insight into different roles within the NHS.

Many larger hospitals have named work experience coordinators who deal with both clinical and non-clinical placements. Ideally, you require the former and should specify this from the start. Check whether the coordinator(s) deals with all applicants or if there's someone who specifically facilitates experience for adults and/or undergraduates.

If you identify the right person, you'll save yourself time and trouble, and minimise the possibility of misunderstandings. Some hospitals will list the name of the host in the department, and you are required to contact them directly. Remember to make a good impression as these individuals may receive large numbers of applications.

If there's no specific work experience coordinator, volunteer coordinators can often assist with placements. If neither coordinator is employed, the best points of contact are human resources and the heads of the laboratories in which you want to be based. When in doubt, contact both.

Whoever you get in touch with, they'll expect you to show an interest in the work of the hospital and a knowledge of the type of lab in which you hope to gain experience, so do some preliminary research via the NHS website.

There's no need to restrict your choice to just one field but be able to cite overarching disciplines – medical physics, immunology, or phlebotomy, for example – and why they appeal to you. This is important because placements may be restricted to those with a proven interest in a particular career, such as medicine or microbiology. If you sound vague or unfocused about this, you might miss out on an opportunity.

It's likely that you'll have contacts, however distant, working in the local hospital, and it's important to consider using LinkedIn for this activity. Expanding your contacts will allow you to tap into their knowledge of the organisation and any professional tips, hints, or key names that they can provide.

Insider view

Jessica Souter, Open University Graduate

“I looked to work in a pathology lab whilst I was studying as it would give me hands on experience and increase my confidence post uni. I found it through the NHS jobs site, but I had booked a lab tour myself a few months beforehand.

I was very honest about my passions and hopes and demonstrated my knowledge in the interview that I picked up during my studies and my lab tour. I also told a joke related to my scientific discipline which lightened the mood and showed my personality.

I prepared patient specimen samples for biomedical scientists during my time there and loved it. Don't be afraid to ask to tour a lab. Get the feel of it. Learn about how they operate and use your knowledge to your advantage when applying for a role there. They'll know you take them seriously and will take note of your dedication.”

Research labs in hospitals

Hospitals linked to medical schools or universities might also carry out academic research. These may give you the opportunity of a different type of placement, although with the limitations previously indicated by the universities.

Research institutes

Often linked to hospitals or universities, they usually operate separately from these related organisations when it comes to work experience. They frequently offer lengthier experience within the same sort of framework as the industrial companies described in Paid Placements.

Government laboratories and agencies

There are plenty of these dotted around the entire UK, so there’s a strong chance that there will be one or more in your vicinity. They may be unable to take students because of security restrictions or health concerns, but often they are willing to consider short informal placements.

Many of the observations made in the previously discussed placement categories also apply here. Early application is vital as you may be subject to a series of official checks. It helps considerably if you can show an interest in the achievements of the laboratory and

the government department concerned. An expressed ambition to eventually work in this sector is also highly desirable. Gov.uk provides advice on finding a career in the civil service and key contacts to connect with.

Resources

Civil Service Website or go to specific agency or department websites such as the Environment Agency or Department for Environment, Food and Rural Affairs.

In Scotland there is the Scottish Environment Protection Agency and in Northern Ireland, the Department of the Environment.

Science & Technology Facilities Council

National Physical Laboratory

Defence Science and technology Laboratory

Public Health Laboratories

This list of additional options is not exhaustive, but it could give you some idea of where and how to look for placements. Sometimes, the bigger the organisation, the more formal the process may be, so there may be a case for also exploring smaller, privately run laboratories. This may depend on individual circumstances. Some firms of this type may feel they lack the space, resources, or range of work to accommodate you, while others may be happy to accept you straight away – especially if you have used networking to forge a link with them.

7. Volunteering and related activities

Volunteering is an activity that individuals do for free and is usually associated with charities. However, there are many organisations where volunteering could be a mutually beneficial activity.

All relevant experience could be a boost to your CV, in the absence of paid experience, volunteering can be a good alternative. It's worth considering the bigger picture, even if you may not be getting the exact experience you would like, it could in time, lead to more relevant experience. Having an interest or passion for the area in which you are volunteering will help to maintain your interest and motivation.

- Schools could be a good starting point, possibly within labs or supporting teachers.
- A veterinary surgery.
- You may have a passion for science and would like to share your knowledge, by undertaking public engagement or outreach activities. These could take place in schools, local scout and guiding groups (amongst others).
- Contact relevant tutors, professional bodies or local groups such as local physics or astronomy societies.
- Professional bodies and local science groups may have a need for a science writer, writing blogs or similar for organisations that are stretched for funding will give you a great experience and provide evidence of your ability to secure paid work.
- Local environment charities or groups are a great way to build experience in the environment sector.

If you're not sure where to start or what to look for, try websites which advertise local voluntary work opportunities from around the UK. Do IT and Volunteering Matters are good places to start.

Most environmental organisations explain how to become a volunteer on their websites, so select some causes that appeal to you and start researching what's out there. Charities may also market opportunities on national websites like Do IT. Others focus on environmental issues alone, The Conservation Volunteers is one of the best known providers in this category.

Volunteering usually requires a degree of motivation, interest, and commitment from you, rather than just short-term input. There could be competition to secure some roles with national or international organisations. Some have waiting lists or keep a pool of possible candidates. Even the less well-known organisations may insist on an in-depth application and interview. It's important to feel engaged and in tune with their ethos and to show this when you contact them.

Volunteering could offer you a bridge from where you are now to where you want to be.

Insider view

Sarah Andrews, Project Coordinator, STEM Sussex

"As well as being an OU student myself, my 'day job' is with STEM Sussex, an organisation who run various projects to help enthuse and engage young people with Science, Technology, Engineering and Maths.

There are lots of organisations like this all over the country, between them running thousands of inspiring activities each year – classroom demos, after-school clubs, longer projects, big public events, all sorts! Many of these rely on volunteers to help make them happen – and this is where you can get involved as an OU student.

There are opportunities up and down the country for people like you, with a bit of spare time, to help out – and in doing so, you can add meaningful experience to your CV (especially if you're interested in going into teaching or science communication, but also any other career!), build transferable work skills, and network with others already working in the STEM sectors.

If you're interested, a good first step is to check out STEM Ambassadors who can link you with opportunities in your area."

8. What to do if you can’t find a placement

First of all, don’t give up. Persistence can pay off. Perhaps you made your original application at the wrong time or there was simply too much demand for too few places. Review your tactics. With a different approach or at another time of year, you may be successful.

- Have another look at Section 4: Finding placements through networking. Could you be doing more?
- How can you enhance your CV so that you’ll stand out from the crowd? If there’s no possibility of taking extra short courses with the OU or another educational institution, think about expanding sections such as Hobbies and Interests or Additional Information.
- Join a science-related activity like a local environmental group. Active membership of relevant groups and societies can boost your credibility in the job market. Examples could include campaigning against a planning decision or helping to monitor flora and fauna on a nearby common. Even something like taking an eco-tourist or agro-tourist holiday can be valuable – especially if you’ve taken the trouble to talk to tour guides and locals to get fuller insights into their ethos.

Appendix 1: OU contact information

For advice about choosing OU qualifications and modules visit The Open University website or call Student Recruitment.

Student Recruitment

The Open University PO Box 197
Milton Keynes
MK7 6BJ

Phone: +44 (0) 300 303 5303

Email via www.open.ac.uk/contact

For Welsh speakers

If you would prefer to discuss your study needs in Welsh, please contact The Open University in Wales in Cardiff, where we will be pleased to offer personal guidance as well as information about the services available. You may contact us by letter, phone or email, or you are welcome to visit us. We recommend that you make an appointment first to make sure an appropriate adviser will be available.

Although we are able to offer a range of services for Welsh speakers, our study materials and teaching are normally in English.

Phone: +44 (0) 29 2047 1170

Email: wales@open.ac.uk

I siaradwyr Cymraeg

Os yw hi'n well gennych drafod eich anghenion astudio yn Gymraeg mae croeso i chi gysylltu â'r Brifysgol Agored yng Nghymru yng Nghaerdydd lle byddwn

yn falch o roi cyfarwyddyd personol i chi yn ogystal â gwybodaeth am y gwasanaethau sydd ar gael. Gallwch gysylltu â ni drwy lythyr, galwad ffôn neu neges ebost, neu, os yw hi'n well gennych, mae croeso i chi ymweld â ni. Byddem yn argymell i chi wneud apwyntiad gyntaf i sicrhau y bydd arbenigwr priodol ar gael.

Nodwch, os gwelwch yn dda, er ein bod yn gallu cynnig ystod o wasanaethau i siaradwyr Cymraeg, bod ein deunyddiau cwrs ac addysgu fel arfer yn Saesneg.

Rhif ffon: + 44 (0) 29 2047 1170

Ebost: wales@open.ac.uk

Republic of Ireland

Enquiry and Advice Centre in Dublin

Tel: +353 (1) 678 5399 or

The Open University in Ireland

Tel: +44 (0)28 9032 3722.

Email: ireland@open.ac.uk

Appendix 2: Careers information

The Open University

For careers information and advice visit the OU's Careers and Employability Services This website also contains a number of case studies where you can explore the journeys of OU students succeeding in their chosen careers or in further study. OU students can also access forums and webinars on a range of topics to help you plan and manage your career. You will need your OU login details to view these.

You can also explore a range of tailored careers information through your Science subject site. You'll find it under the 'Succeed' tab.

For details of OU qualifications and modules, visit The Open University prospectus.